

**REMARKS**

Claims 1-21 are pending in the present application. Claim 1 is independent.

**RESTRICTION REQUIREMENT**

In the Restriction Requirement, the Examiner is restricting the application to one of the following groups under 35 U.S.C. §121:

Group I: Claims 1-17, drawn to a method of growing an AlGa<sub>N</sub> semiconductor layer structure.

Group II: Claims 18-21, drawn to an AlGa<sub>N</sub> layer and AlGa<sub>N</sub> multilayer structure.

**ELECTION OF SPECIES**

Further, the Examiner requires election between the allegedly patentably distinct species as listed below:

Group I, Species 1, drawn to a method including Al supplied at a first specific pressure, upon which claims 1-5 read;

Group I, Species 2, drawn to a method including Al supplied at a second specific pressure, upon which claims 1-4 and 6 read;

Group I, Species 3, drawn to a method including varying the supply rate of Ga and or Al to grow a second AlGa<sub>N</sub> layer, upon which claims 1, and 7-8 read;

Group I, Species 4, drawn to a method including varying the supply rate of Ga and or Al to grow a third AlGa<sub>N</sub> layer, upon which claims 1 and 9-10 read;

Group I, Species 5, drawn to an InGa<sub>N</sub> substrate, upon which claims 1, 11-12, and 14 read;

Group I, Species 6, drawn to a Ga<sub>N</sub> layer substrate, upon which claims 1 and 13 read;

Group I, Species 7, drawn to a method including a doping step, upon which claims 1 and 15 read;

Group I, Species 8, drawn to a specific Al mole fraction range, upon which claim 1 reads;

Group II, Species 1, drawn to an AlGa<sub>N</sub> layer, upon which claim 18 reads;

Group II, Species 2, drawn to an AlGa<sub>N</sub> multilayer structure, upon which claim 19 reads;

Group II, Species 3, drawn to an optoelectronic device with an AlGa<sub>N</sub> layer, upon which claim 20 reads;

Group II, Species 4, drawn to an optoelectronic device with an AlGa<sub>N</sub> multilayer structure, upon which claim 21 reads.

#### **APPLICANT'S ELECTION**

In response to the Examiner's restriction/election requirement, Applicant elects to prosecute Group I, Species 1 including claims 1-5, without traverse. Applicant specifically reserves the right to file divisional applications directed to any non-elected claims.

**CONCLUSION**

An early indication of the allowability of each of claims 1-17 in connection with the present application is earnestly solicited.

In the event there are any outstanding matters remaining in this application, the Examiner is invited to contact Donald J. Daley at the address of the undersigned below.

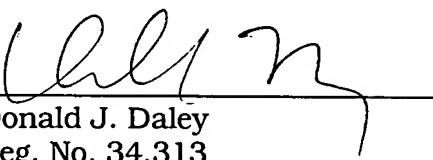
If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §1.16 or under §1.17; particularly, extension of time fees.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKY & PIERCE, PLC

By

  
Donald J. Daley  
Reg. No. 34,313  
P.O. Box 8910  
Reston, VA 20195  
(703) 668-8000

DJD/ADK/cfc

